Wall-Mount Rack (1 Battery) for XM2-300HP™ Power Supply Installation Instructions

NOTICE:

Install the system in a sheltered, weather-protected location inaccessible to the general public.

⚠ **CAUTION!**

The installer must verify the wall is capable of supporting the loaded rack. Direct mounting to a wall stud or equivalent is required. Do not cover top or side vents with any material after installation.

Tools and Materials:

- Six user-supplied 5/16" × 3" (or metric equivalent) lag bolts
- User-supplied grounding wire (of sufficient length for application)
- Drill w/ 1/4" (or metric equivalent) drill bit
- Ratchet w/ 1/2" and 5/16" (or metric equivalent) sockets
- Level
- 1" Torque wrench
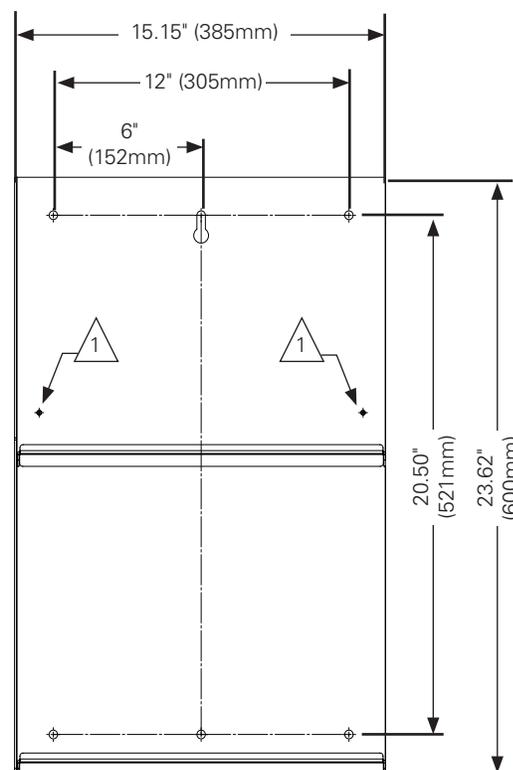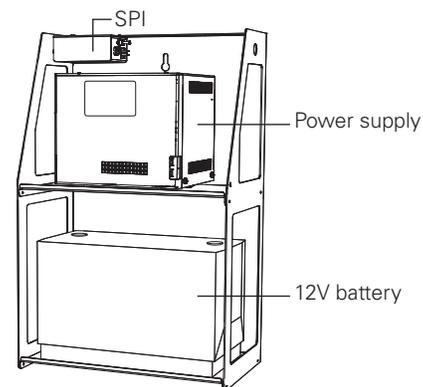- Stud finder (optional)
- Tape measure (optional)

Installation Procedure:

1. See Fig. 1 for the dimensions of the shelf. Select a location that allows sufficient clearance on the top, bottom and sides for cabling and ventilation required for the installation. Clearance recommendation for the top and sides is 10", and 3" for the bottom.

2. Locate one stud and drill pilot hole. Install first user-supplied 5/16" lag bolt and hang the shelf using the keyslot. Mark and drill second hole in a stud and install second lag bolt. Secure both lag bolts once shelf is positioned.

3. To install a service power inserter (SPI), use either of the two SPI mounting holes on the top of the rack. Place the SPI so that the seizure screw is facing up. Tighten the SPI to 130 in-lb (14.5 Nm).

IMPORTANT:

For proper operation of the power supply and communications module, external grounding of the rack is required.

4. Connect the power supply external ground connection to the rack ground stud ⚠ in Fig. 1. Follow the proper stack up (Fig. 2) to attach the supplied #10-32 nut, lock washer, flat washer, and supplied ground wire.

5. Using a user-supplied ground wire, connect the rack to the power supply ground by using the #10-32 ground stud ⚠ in Fig. 1. Connect the other end of the ground wire to the power supply using the ground screw provided (Fig. 3). Refer to applicable codes to determine additional grounding requirements.

For installation and connections, refer to the power supply's technical manual at www.alpha.com.

SPI
Power supply
12V battery

15.15" (385mm)
12" (305mm)
6" (152mm)
20.50" (521mm)
23.62" (600mm)

⚠ 1 #10-32 ground studs

Fig. 1, Mounting Hole Layout

Grounding Wire
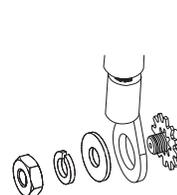
Fig. 2, Hardware Stack Up   **Fig. 3, Power Supply Ground**
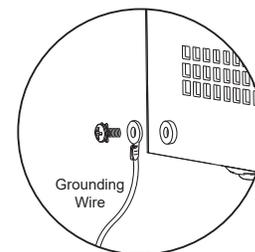
Wall-Mount Shelf (Small) for XM2-300HP™ Power Supply Installation Instructions

NOTICE:

Install the system in a sheltered, weather-protected location inaccessible to the general public.

CAUTION!

The installer must verify the wall is capable of supporting the loaded rack. Direct mounting to a wall stud or equivalent is required. Do not cover top or side vents with any material after installation.

Tools and Materials:

- Four user-supplied 5/16" × 3" (or metric equivalent) lag bolts
- User-supplied 1/2" thick sheet of plywood
- User-supplied grounding wire (of sufficient length for application)
- Drill w/ 1/4" (or metric equivalent) drill bit
- Ratchet w/ 1/2" and 5/16" (or metric equivalent) sockets
- Level
- 1" Torque wrench
- Stud finder (optional)
- Tape measure (optional)

Installation Procedure:

1. See Fig. 4 for the dimensions of the shelf. Select a location that allows sufficient clearance on the top, bottom and sides for cabling required for the installation. Clearance recommendation for the top and sides is 3", and 10" for the bottom.

2. Using the back of the shelf as a template, cut a piece of 1/2" plywood and mark and drill pilot holes for the keyslot.

3. Locate one stud and a drill pilot hole. Install the first user-supplied 5/16" lag bolt and hang the shelf and plywood behind it using the keyslot. Drill the second hole through the plywood and into the stud and install the second lag bolt. Drill the top left and right holes in the plywood though the shelf and install the 3rd and 4th lag bolts. Tighten all lag bolts once the shelf is positioned.

IMPORTANT:

For proper operation of the power supply and communications module, external grounding of the shelf is required.

4. Install the service power inserter (SPI) to the SPI bracket and torque to 130 in-lb (14.5 Nm). Follow the proper stack up as shown in Fig. 5 and mount the SPI bracket onto either of the #10-32 studs ⚠2 in Fig. 4. Tighten the supplied #10-32 nut, lock washer, and flat washer.

Power supply
SPI

10.12" (257mm)
8" (203mm)
6.09" (155mm)
4" 102mm
6.94" 176mm
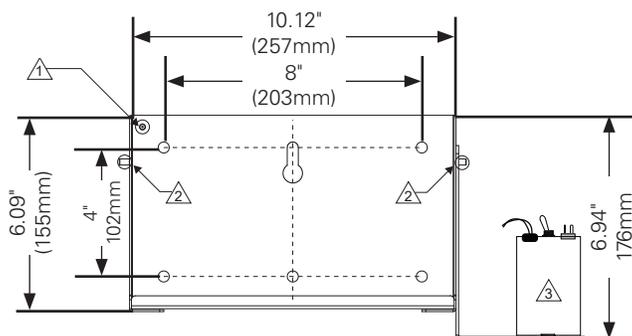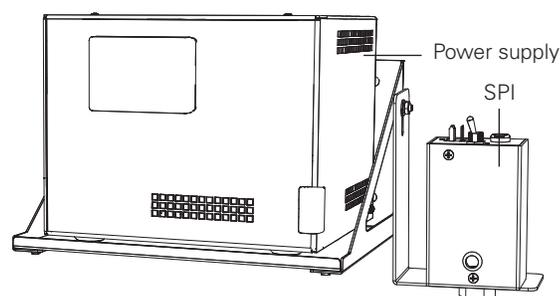
⚠1 #10-32 ground stud

⚠2 #10-32 SPI mounting bracket / ground stud

⚠3 SPI

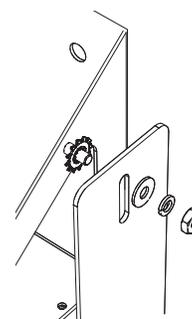**Fig. 4, Mounting Hole Layout and SPI Bracket**

Fig. 5, SPI Hardware Stack Up

5. Connect the power supply external ground connection to the rack ground stud ⚠ in Fig. 4. Follow the proper stack up (Fig. 6) to attach the supplied #10-32 nut, lock washer, flat washer, and supplied ground wire.

6. Using a user-supplied ground wire, connect the rack to the power supply ground by using the #10-32 ground stud ⚠ in Fig. 3. Connect the other end of the ground wire to the power supply using the ground screw provided (Fig. 7). Refer to applicable codes to determine additional grounding requirements.

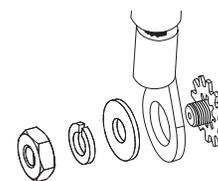*For installation and connections, refer to the power supply's technical manual at www.alpha.com.*
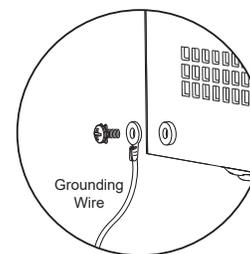

Fig. 6, Hardware Stack Up

Grounding Wire

Fig. 7, Power Supply Ground

Wall-Mount Rack (1 Battery) for XM3.1-HP™ Power Supply 3 & 5 Amp Models Installation Instructions

NOTICE:

Install the system in a sheltered, weather-protected location inaccessible to the general public.

⚠️ **CAUTION!**

The installer must verify the wall is capable of supporting the loaded rack. Direct mounting to a wall stud or equivalent is required. Do not cover top or side vents with any material after installation.

Tools and Materials:

- Rack for power supply and one battery
- Battery shelf bracket (×1) w/ supplied #10-32 × 1/2" screws (×2)
- Power supply brackets (×2) w/ supplied #10-32 × 1/2" screws (×2)
- Six user-supplied 5/16" × 3" (or metric equivalent) lag bolts
- User-supplied 5/8" thick sheet of plywood
- Six 3" wood screws
- User-supplied grounding wire (of sufficient length for application)
- Drill with 1/4" (or metric equivalent) drill bit
- Ratchet with 1/2" and 5/16" (or metric equivalent) sockets
- Level
- 1" Torque wrench
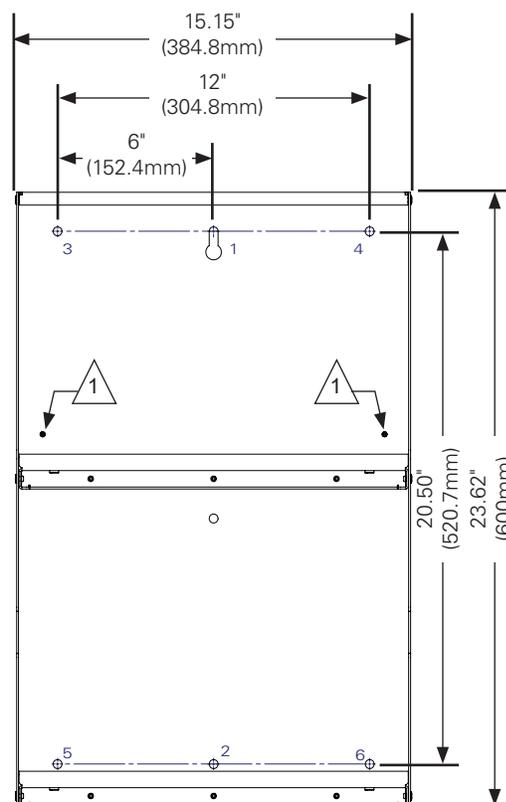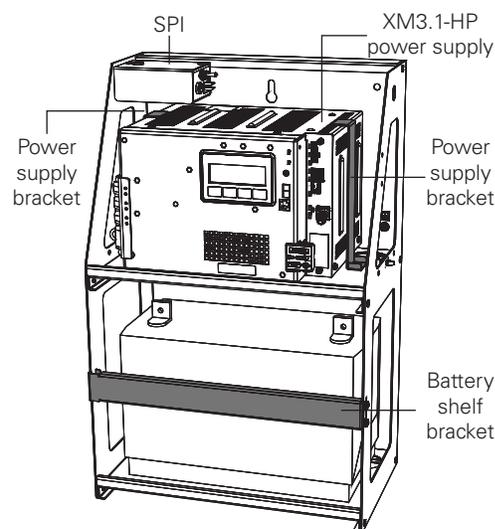- Stud finder (optional)
- Tape measure (optional)

Installation Procedure:

1. See Fig. 8 for the dimensions of the shelf. Select a location that allows sufficient clearance on the top, bottom and sides for cabling and ventilation required for the installation.

2. Locate studs for installation. Cut plywood wide enough for both edges to span two studs. Drill pilot holes. Fasten the plywood with three 3" wood screws per stud (for a total of six wood screws), and screw flush to the plywood. Mark and drill all pilot holes with holes 4 and 6, or holes 3 and 5 lined up with a stud.

IMPORTANT:

For proper operation of the power supply and communications module, external grounding of the rack is required.

3. Install the first user-supplied 5/16" lag bolt and hang the rack using the key slot. Mark and drill the second and third center-line holes in the stud and install the second and third lag bolts. Tighten all lag bolts once the rack is positioned.

4. To install a service power inserter (SPI), use either of the two SPI mounting holes on the top of the rack. Place the SPI so that the seizure screw is facing up. Tighten the SPI to 130 in-lb (14.5Nm).

SPI
XM3.1-HP power supply
Power supply bracket
Power supply bracket
Battery shelf bracket

15.15" (384.8mm)
12" (304.8mm)
6" (152.4mm)
3 1 4
1 1
20.50" (520.7mm)
23.62" (600mm)
5 2 6

⚠️ 1 #10-32 ground stud

Fig. 8, Mounting Hole Layout - XM3.1-HP Power Supply One Battery Rack

5. Install the XM3.1-HP**™** power supply and place the brackets on either side (Fig. 9), securing them in place with supplied #10-32 × 1/2" screws.

6. Connect the power supply external ground connection to the rack ground stud ⚠ in Fig. 8. Follow the proper stack up (Fig. 10) to attach the supplied #10-32 nut, lock washer, flat washer, and supplied ground wire.

7. Using a user-supplied ground wire, connect the rack to the power supply ground by using the #10-32 ground stud ⚠ in Fig. 8. Connect the other end of the ground wire to the power supply using the ground screw provided (Fig. 11). Refer to applicable codes to determine additional grounding requirements.

8. Insert the battery on the bottom shelf. Install the battery shelf bracket by sliding the hooked end into the slot on the rack and securing the other end with two #10-32 × 1/2" screws (Fig. 12).
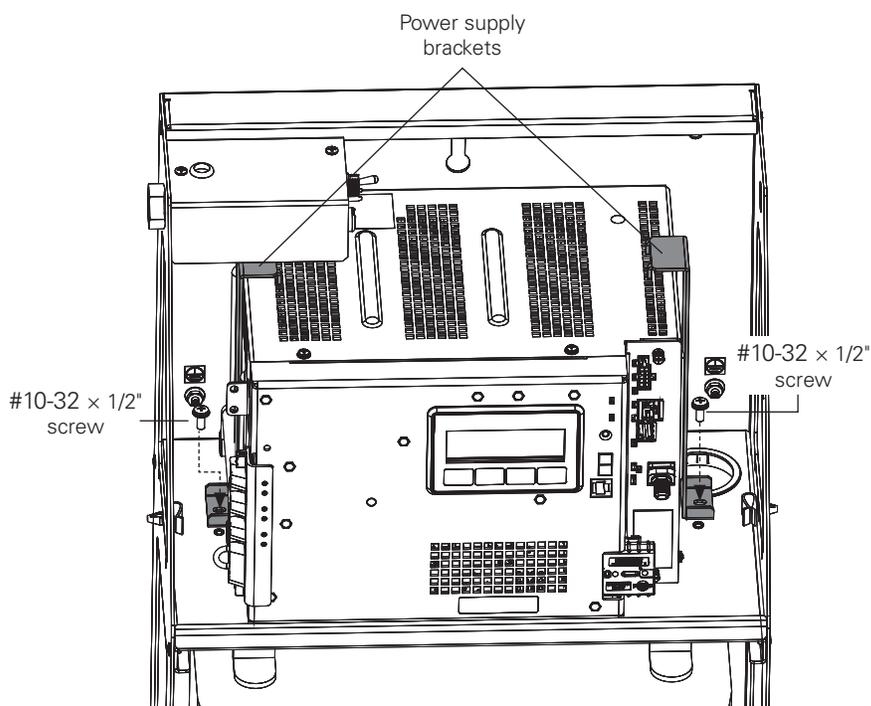
For installation and connections, refer to the power supply's technical manual at www.alpha.com.

Power supply brackets

#10-32 × 1/2" screw

#10-32 × 1/2" screw

Fig. 9, Installing Power Supply Brackets
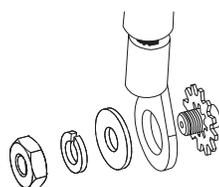
Fig. 10, Hardware Stack Up

Grounding Wire

Fig. 11, Power Supply Ground
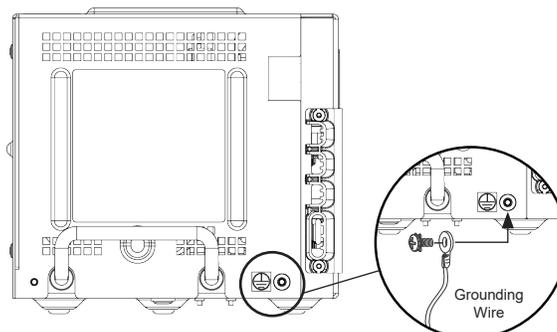
Slide bracket's hooked end through slot
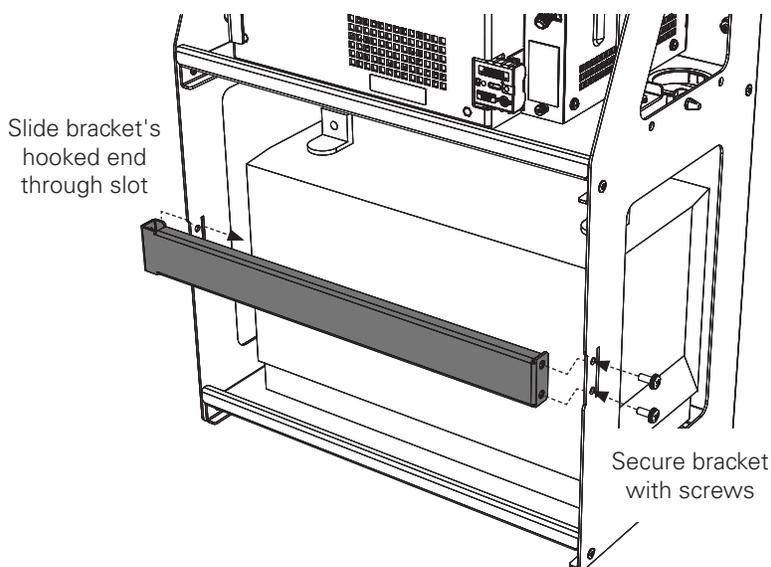
Secure bracket with screws

Fig. 12, Installing Battery Rack Bracket

Wall-Mount Rack (2 Battery) for XM3.1-HP™ Power Supply
3 & 5 Amp Models Installation Instructions

NOTICE:

Install the system in a sheltered, weather-protected location inaccessible to the general public.

CAUTION!

The installer must verify the wall is capable of supporting the loaded rack. Direct mounting to a wall stud or equivalent is required. Do not cover top or side vents with any material after installation.

Tools and Materials:

- Rack for power supply and two batteries
- Battery shelf bracket (×1) w/ supplied #10-32 × 1/2" screws (×2)
- Power supply brackets (×2) w/ supplied #10-32 × 1/2" screws (×2)
- Nine user-supplied 5/16" × 3" (or metric equivalent) lag bolts
- User-supplied 5/8" thick sheet of plywood
- Six 3" wood screws
- User-supplied grounding wire (of sufficient length for application)
- Drill w/ 1/4" (or metric equivalent) drill bit
- Ratchet w/ 1/2" and 5/16" (or metric equivalent) sockets
- Level
- 1" Torque wrench
- Stud finder (optional)
- Tape measure (optional)

Installation Procedure:

1. See Fig. 13 for the dimensions of the shelf. Select a location that allows sufficient clearance on the top, bottom and sides for cabling and ventilation required for the installation.

2. Locate studs for installation. Cut plywood wide enough for both edges to span two studs. Drill pilot holes. Fasten the plywood with three 3" wood screws per stud (for a total of six wood screws), and screw flush to the plywood. Mark and drill all pilot holes with holes 5, 7 and 9, or holes 4, 6 and 8 lined up with a stud.

IMPORTANT:

For proper operation of the power supply and communications module, external grounding of the rack is required.

3. Install the first user-supplied 5/16" lag bolt and hang the rack using the key slot. Mark and drill the second and third center-line holes in the stud and install the second and third lag bolts. Tighten all lag bolts once the rack is positioned.

4. To install a service power inserter (SPI), use either of the two SPI mounting holes on the top of the rack. Place the SPI so that the seizure screw is facing up. Tighten the SPI to 130 in-lb (14.5 Nm).
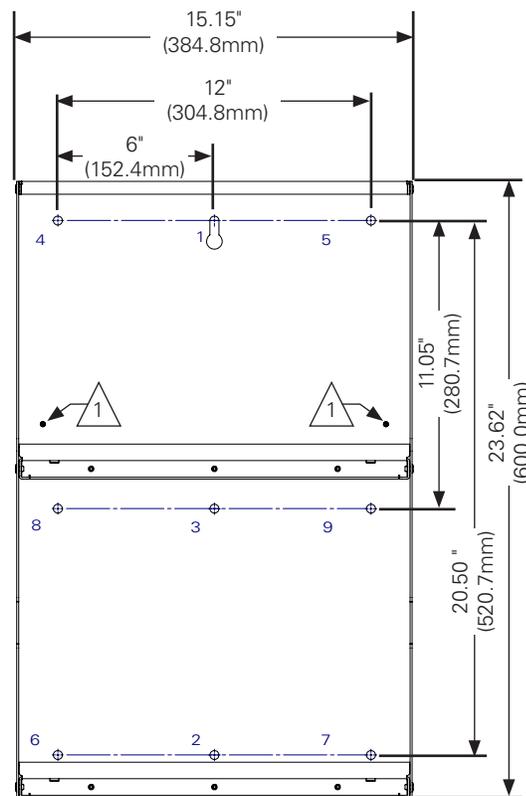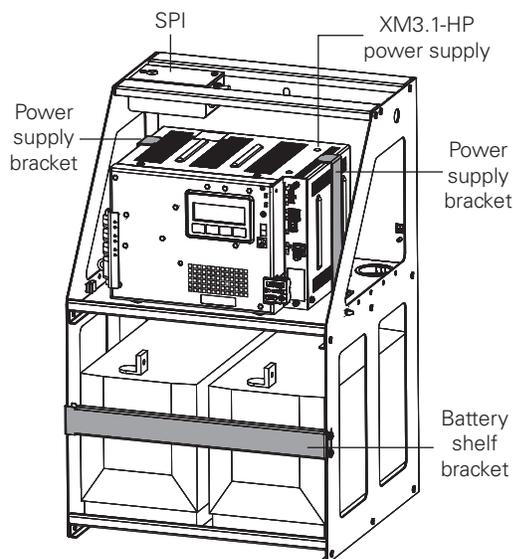
⚠️1 #10-32 ground stud

Fig. 13, Mounting Hole Layout - XM3.1-HP Power Supply Two Battery Rack

5. Install the XM3.1-HP™ power supply and place the brackets on either side, securing them in place with supplied #10-32 × 1/2" screws (Fig. 14).

6. Connect the power supply external ground connection to the rack ground stud ⚠ in Fig. 13. Follow the proper stack up (Fig. 15) to attach the supplied #10-32 nut, lock washer, flat washer, and supplied ground wire.

7. Using a user-supplied ground wire, connect the rack to the power supply ground by using the #10-32 ground stud ⚠ in Fig. 13. Connect the other end of the ground wire to the power supply using the ground screw provided (Fig. 16). Refer to applicable codes to determine additional grounding requirements.

8. Insert the batteries on the bottom shelf. Install the battery shelf bracket by sliding the hooked end into the slot on the rack and securing the other end with two #10-32 × 1/2" screws (Fig. 17).
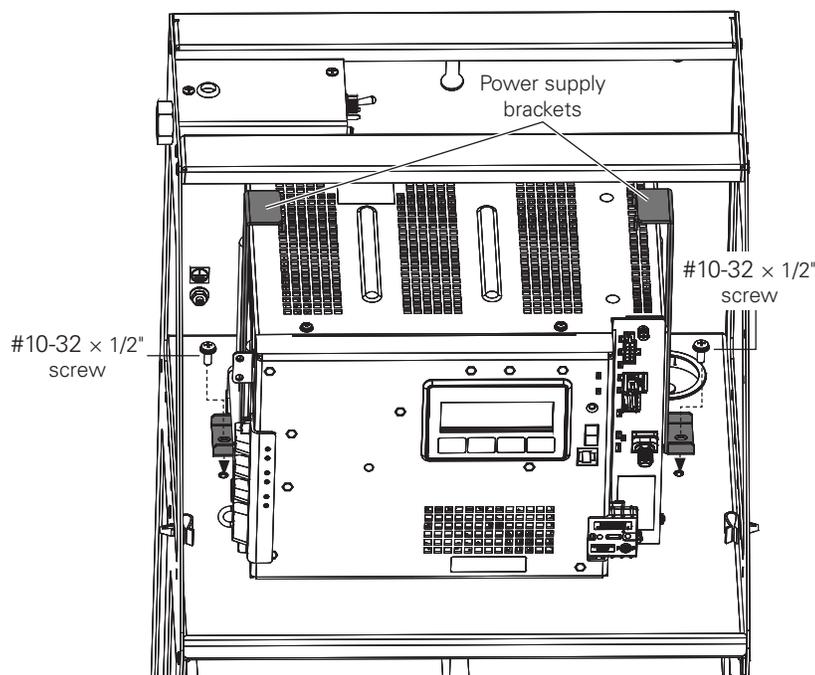
For installation and connections, refer to the power supply's technical manual at www.alpha.com.

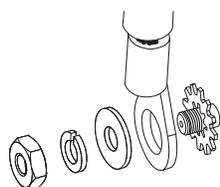**Fig. 14, Installing Power Supply Brackets**
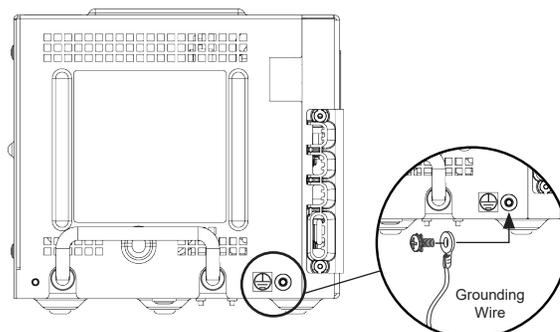

Fig. 15, Hardware Wire Stack Up

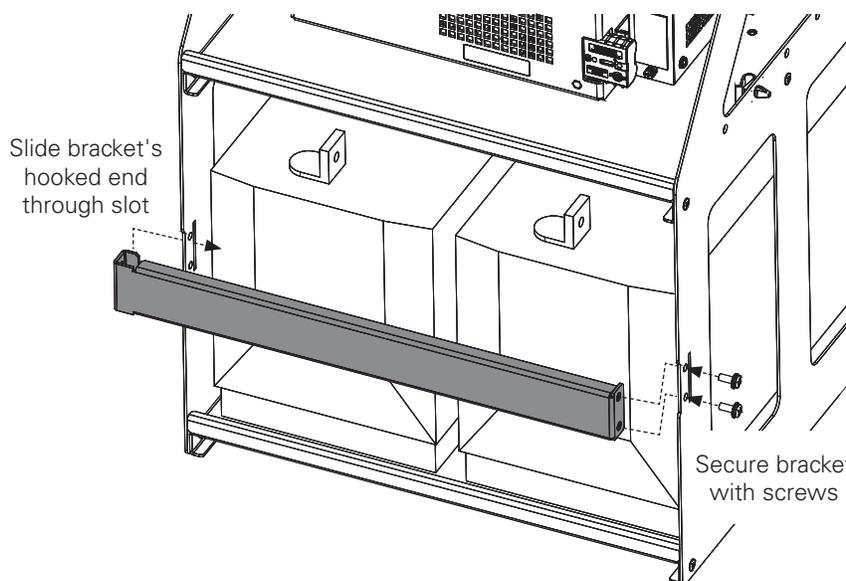**Fig. 16, Power Supply Ground**

Fig. 17, Installing Battery Shelf Bracket

Wall-Mount Shelf for XM3.1-HP™ Power Supply 3 & 5 Amp Models Installation Instructions

✓ **NOTICE:**

Install the system in a sheltered, weather-protected location inaccessible to the general public.

⚠ **CAUTION!**

The installer must verify the wall is capable of supporting the loaded rack. Direct mounting to a wall stud or equivalent is required. Do not cover top or side vents with any material after installation.

Tools and Materials:

- Power supply shelf
- Power supply brackets (×2) w/ supplied #10-32 × 1/2" screws (×2)
- Four user-supplied 5/16" × 3" (or metric equivalent) lag bolts
- User-supplied 1/2" thick sheet of plywood (at least 18" × 7")
- User-supplied grounding wire (of sufficient length for application)
- Drill w/ 1/4" (or metric equivalent) drill bit
- Ratchet w/ 1/2" and 5/16" (or metric equivalent) sockets
- Level
- 1" Torque wrench
- Stud finder (optional)
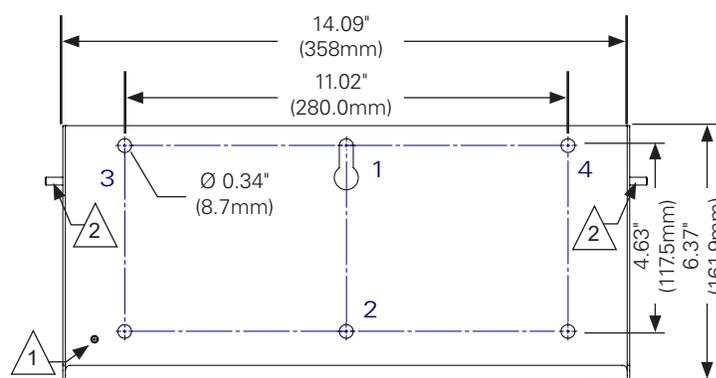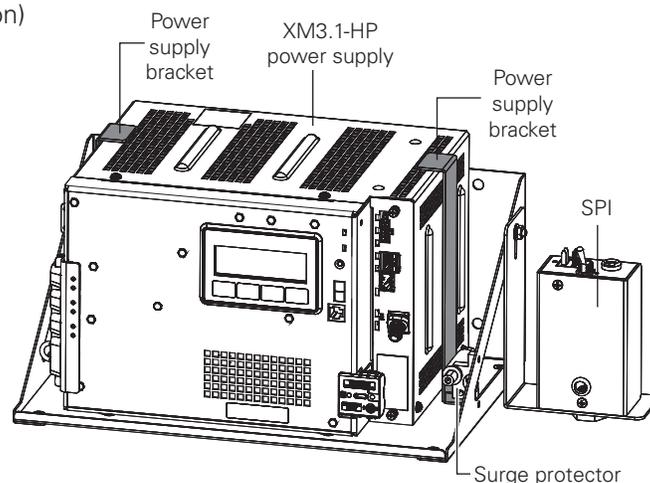- Tape measure (optional)

Installation Procedure:

1. See Fig. 18 for the dimensions of the shelf. Select a location that allows sufficient clearance on the top, bottom and sides for cabling required for the installation.

2. Using the back of the shelf as a template, cut a piece of 1/2" plywood and mark and drill pilot holes for the keyslot.

3. Locate one stud and a drill pilot hole. Install the first user-supplied 5/16" lag bolt and hang the shelf and plywood behind it using the keyslot. Drill the second hole through the plywood and into the stud and install the second lag bolt. Drill the top left and right holes in the plywood though the shelf and install the 3rd and 4th lag bolts. Tighten all lag bolts once the shelf is positioned.

IMPORTANT:

For proper operation of the power supply and communications module, external grounding of the shelf is required.

4. Install the service power inserter (SPI) to the SPI bracket and torque to 130 in-lb (14.5 Nm). Follow the proper stack up as shown in Fig. 19 and mount the SPI bracket onto either of the #10-32 studs ⟨2⟩ in Fig. 18, and tighten the supplied #10-32 nut, lock washer, and flat washer.

Power supply bracket · XM3.1-HP power supply · Power supply bracket · SPI · Surge protector

14.09" (358mm)
11.02" (280.0mm)
Ø 0.34" (8.7mm)
4.63" (117.5mm)
6.37" (161.9mm)

⟨1⟩ #10-32 ground stud

⟨2⟩ #10-32 SPI mounting bracket / ground stud

Fig. 18, Mounting Hole Layout - XM3.1-HP Power Supply Shelf

5. Install the XM3.1-HP**™** power supply and place the brackets on either side, securing it in place with supplied #10-32 × 1/2" screws (Fig. 20).

6. Connect the power supply external ground connection to the rack ground stud ⚠ in Fig. 18. Follow the proper stack up (Fig. 21) to attach the supplied #10-32 nut, lock washer, flat washer, and supplied ground wire.

7. Using a user-supplied ground wire, connect the rack to the power supply ground by using the #10-32 ground stud ⚠ in Fig. 18. Connect the other end of the ground wire to the power supply using the ground screw provided (Fig. 22). Refer to applicable codes to determine additional grounding requirements.

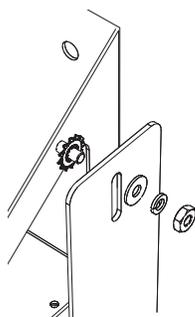*For installation and connections, refer to the power supply's technical manual at www.alpha.com.*
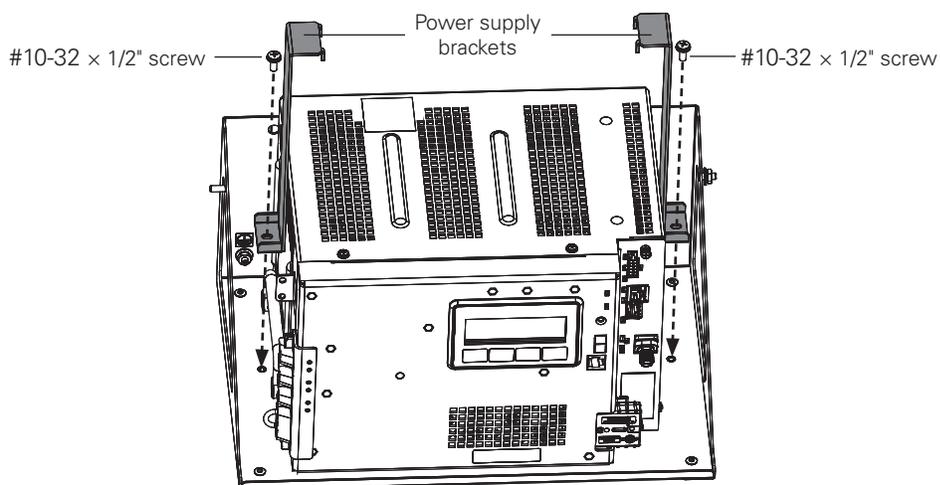

Fig. 19, SPI Hardware Stack Up

#10-32 × 1/2" screw · Power supply brackets · #10-32 × 1/2" screw

Fig. 20, Power Supply Bracket Installation - XM3.1-HP Power Supply Shelf
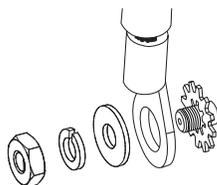
Fig. 21, Hardware Stack Up
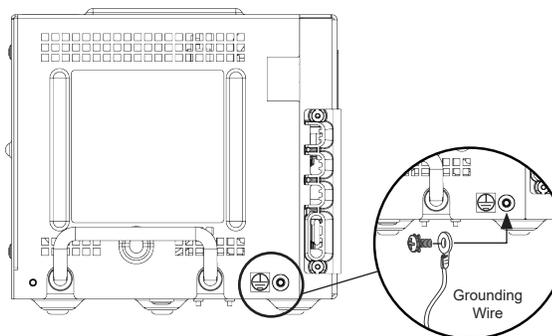
Grounding Wire

Fig. 22, Power Supply Ground

746-221-C0-001, Rev. D (07/2023)

For more information please visit **www.alpha-outback-energy.com**